

REMARKS

This application has been reviewed in light of the Office Action dated June 20, 2003. Claims 1-14 are pending in this application. Claims 7-14 have been added to provide Applicant with a more complete scope of protection. Claims 1-6 have been amended to define still more clearly what Applicant regards as the invention, in terms that distinguish over the art of record. Claims 1 and 8 are in independent form. Favorable reconsideration is requested.

First, Applicant gratefully acknowledges the indication that Claims 2, 5, and 6 include allowable subject matter and would be allowable if rewritten in proper independent form. These claims have not been so rewritten because, for the reasons given below, their base claim is believed to be allowable. Moreover, the amendments made to these claims herein are not believed to affect their allowability.

The Office Action rejected Claims 1, 3, and 4 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,464,416 (Aoshima), in view of U.S. Patent No. 6,108,108 (Ping).

Applicant submits that independent Claim 1, together with the claims dependent thereon, are patentably distinct from the proposed combination of the cited prior art at least for the following reasons.

The aspect of the present invention set forth in Claim 1 is an image reading apparatus including an original mounting table, a scanning means for scanning an original mounted on the original mounting table, and a carriage for mounting the scanning means thereon. A driving member is provided, for and transmits a moving force to the carriage, and a guide member is provided for guiding the carriage in the movement direction thereof.

One important feature of Claim 1 is that the carriage is biased in a rotating direction centering about an axis perpendicular to the original mounting table by the

tension of the driving member cable. This feature may be understood by referring, for example, to Fig. 2A and page 11, lines 11-16:

As previously described, the reading unit 2 is always biased in the direction of arrow A due to the moment created by the tension applied to the wire 13, and the slider portions 22b and 22c contact with the rail 12, whereby the posture of the reading unit is maintained.

Thus, the bias applied to the carriage by the tension of the driving cable is rotational, as indicated by the arrows labeled "A," and this bias helps to maintain the proper position of the carriage despite possible vibrations caused by backlash in the bearings and guide shaft (see page 5, lines 2-14). It is to be understood, of course, that the scope of the claims is not limited by the details of this embodiment.

*Aoshima*, as the Office Action acknowledges, does not teach or suggest a carriage that is biased in a rotating direction centering about an axis perpendicular to the original mounting table by tension of a driving member, as recited in Claim 1.

The Office Action turns to Peng with respect to this feature. As understood by Applicant, *Peng* relates to a platen type scanner driving mechanism in which an optical module 21 module housed in a carrier 23 is driven along a fixed lever 25 by a wire 27 and a driving unit 29.

The Office Action specifically refers to the driving unit 29 and col. 2, line 63, through col. 3, line 2, which describes how the driving unit 29 drives a set of gears which in turn drive the wire 27 to move the carrier 23. While the driving unit 29 does rotate, this has nothing to do with applying a rotational bias to the carrier by the tension of the wire. As shown in Figs. 2 and 3, the wire 27 runs in a straight line parallel to the fixed lever 25, and therefore the tension of the wire does not bias the carriage in a rotating direction. This is in stark contrast to the configuration depicted in Fig. 2A of the present application, which clearly shows an example of how tension in a driving cable may be used

to bias the carriage in a rotating direction (as indicated by the arrows labeled "A"). Indeed, nothing has been found in Peng that teaches or suggests applying any sort of bias to the carrier by tension of the wire, nor anything that would teach the specific arrangement recited in Claim 1.

Accordingly, Applicant submits that the proposed combination of *Aoshima* and *Peng*, assuming such combination would even be permissible, would still fail to teach or suggest a carriage that is biased in a rotating direction centering about an axis perpendicular to the original mounting table by tension of a driving member, as recited in Claim 1.

Independent Claim 8 includes the same feature of a carriage that is biased in a rotating direction centering about an axis perpendicular to the original mounting table by tension of a driving member, as discussed above in connection with Claim 1. In addition, Claim 8 recites that the driving member extends along a first line from a forward side of the carriage and extends along a second line from a backward side of the carriage, and that the first line and the second line are not coincident when viewed along the axis perpendicular to the original mounting table. Accordingly, Claim 8 is believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.

All of the other claims in this application depend from one or the other of the independent claims discussed above, and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual consideration or reconsideration, as the case may be, of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

  
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